| **************************************  | Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control num           |   |  |  |  |  |  |  |  |  |
|---|---|---|--|--|--|--|--|--|--|--|
| TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US)  |   |   | 713939.34                                |  |  |  |  |  |  |  |
|   | CERNING A SUBMISSION U  | U.S. APPLICATION NO. (If known, see 37 CFR 1.5) |  |  |  |  |  |  |  |  |
| INTERNA   | TIONAL APPLICATION NO.<br><b>2004/042099</b>  | INTERNATIONAL FILING DATE  December 16, 2004    | PRIORITY DATE CLAIMED  December 17, 2003 |  |  |  |  |  |  |  |
| TITLE OF  | INVENTION   |   |  |  |  |  |  |  |  |  |
| HOPPER WITH FLOW CONTROLLER/ENHANCER FOR CONTROLLING THE GRAVITATIONAL FLOW OF GRANULAR MATERIAL  |   |   |  |  |  |  |  |  |  |  |
| APPLICANT(S) FOR DO/EO/US   |   |   |  |  |  |  |  |  |  |  |
| Enrique Nieves-Vazquez  Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information: |   |   |  |  |  |  |  |  |  |  |
| 1. 🛛  | This is a FIRST submission of items concerning a submission under 35 U.S.C. 371.  |   |  |  |  |  |  |  |  |  |
| 2.  | This is a <b>SECOND</b> or <b>SUBSEQUENT</b> submission of items concerning a submission under 35 U.S.C. 371.   |   |  |  |  |  |  |  |  |  |
| 3.  | This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (21) indicated below. |   |  |  |  |  |  |  |  |  |
| 4.  | The US has been elected (Article 31).   |   |  |  |  |  |  |  |  |  |
| 5. 🛚  | A copy of the International Application as filed (35 U.S.C. 371(c)(2))  |   |  |  |  |  |  |  |  |  |
|   | a.  is attached hereto (required only if not communicated by the International Bureau).   |   |  |  |  |  |  |  |  |  |
|   | b. 🔀 has been communicated by the International Bureau.   |   |  |  |  |  |  |  |  |  |
|   | c. is not required, as the application was filed in the United States Receiving Office(RO/US)   |   |  |  |  |  |  |  |  |  |
| 6. 🗌  | An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)).  |   |  |  |  |  |  |  |  |  |
|   | a. is attached hereto.  |   |  |  |  |  |  |  |  |  |
|   | b. has been previously submitted under 35 U.S.C. 154(d)(4).   |   |  |  |  |  |  |  |  |  |
| 7. 🛛  | Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))  |   |  |  |  |  |  |  |  |  |
|   | a. are attached hereto (required only if not communicated by the International Bureau).   |   |  |  |  |  |  |  |  |  |
|   | b. have been communicated by the International Bureau.  |   |  |  |  |  |  |  |  |  |
|   | c. have not been made; however, the time limit for making such amendments has NOT expired.  |   |  |  |  |  |  |  |  |  |
|   | d. A have not been made and will not be made.   |   |  |  |  |  |  |  |  |  |
| 8. 🗌  | An English language translation of the amer   | ndments to the claims under PCT Art             | icle 19 (35 U.S.C. 371(c)(3)).           |  |  |  |  |  |  |  |
| 9. 🛛  | An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).  |   |  |  |  |  |  |  |  |  |
| 10.   | An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).                    |   |  |  |  |  |  |  |  |  |
| Items 11 to 20 below concern document(s) or information included:   |   |   |  |  |  |  |  |  |  |  |
| 11. 🛛   | An Information Disclosure Statement under   | 37 CFR 1.97 and 1.98.                           |  |  |  |  |  |  |  |  |
| 12.   | An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.   |   |  |  |  |  |  |  |  |  |
| 13. 🛚   | A preliminary amendment.  |   |  |  |  |  |  |  |  |  |
| 14. 🛛   | An Application Data Sheet under 37 CFR 1.76.  |   |  |  |  |  |  |  |  |  |
| 15. 🗌   | A substitute specification.   |   |  |  |  |  |  |  |  |  |
| 16. 🗌   | A power of attorney and/or change of address letter.  |   |  |  |  |  |  |  |  |  |
| 17. 🔲   | A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 37 CFR 1.821 - 1.825.  |   |  |  |  |  |  |  |  |  |
| 18. 🗌   | A second copy of the published International Application under 35 U.S.C. 154(d)(4).   |   |  |  |  |  |  |  |  |  |
| 19.   | A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).   |   |  |  |  |  |  |  |  |  |

This collection of information is required by 37 CFR 1.414 and 1.491-1.492. The information is required to obtain or retain a benefit by the public, which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 15 minutes to complete, including gathering information, preparing, and submitting the completed form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

PTO-1390 (Rev. 07-2005)
Approved for use through 3/31/2007. OMB 0651-0021
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

| U.S. APPLICATION NO. (If known, see 37 CFR 1.5)   |   |  | INTERNATIONAL APPLICATION NO.  |         | ATTORNEY'S DOCKET NUMBER |              |              |  |  |  |  |
|---|---|--|--|---------|--------------------------|--------------|--------------|--|--|--|--|
| PCT/US2004/042099   |   |  |  |         |                          | 713939.34    |              |  |  |  |  |
| 20. Other items or information: Foreign references cited  |   |  |  |         |                          |              |              |  |  |  |  |
|   |   |  |  |         |                          |              |              |  |  |  |  |
|   |   |  |  |         |                          |              |              |  |  |  |  |
| The following fees have been submitted  |   |  |  |         |                          | CALCULATIONS | PTO USE ONLY |  |  |  |  |
|   | 21. Sasic national fee (37 CFR 1.492(a))                    |  |  |         |                          |              |              |  |  |  |  |
| 22. Examination   | n fee (37 CFR 1.492(  | \$0  |  |         |                          |              |              |  |  |  |  |
| If the written opinion p  | repared by ISA/US o   |  |  |         |                          |              |              |  |  |  |  |
| All other situations  |   |  |  |         |                          |              |              |  |  |  |  |
| If the written opinion p  |   | \$ 100.00  |  |         |                          |              |              |  |  |  |  |
| IPEA/US ind<br>Search fee (37 CFR 1.  | dicates all claims sati<br>445(a)(2)) has been <sub>l</sub> |  |  |         |                          |              |              |  |  |  |  |
| Internationa<br>International Search R  | I Searching Authority<br>eport prepared by an               |  | Comments of the Comments of th |         |                          |              |              |  |  |  |  |
| communica<br>All other situations   | ted to the US by the I                                      | TO A THE STATE OF  | es according to  |         |                          |              |              |  |  |  |  |
| and the state of the second of the state of | TOTAL OF  | \$ 400.00  |  |         |                          |              |              |  |  |  |  |
| Additional fee fo   | r specification and o                                       |  |  |         |                          |              |              |  |  |  |  |
| (37 CFR 1.492(j))   | nce with 37 CFR 1.82<br>)                                   | 15 energy 15 of 15 | 111  |         |                          |              |              |  |  |  |  |
| The fee is \$250 fo   | or each additional 50                                       | A CALLES   |  |         |                          |              |              |  |  |  |  |
| Total Sheets  | Extra sheets  |  | each additional 50 or fract<br>ound <b>up</b> to a whole numbe   |         | TE                       |              |              |  |  |  |  |
| - 100 =   | /50 =   |  |  | × \$25  | NAC THE REAL PROPERTY.   | \$           |              |  |  |  |  |
| Surcharge of \$130.00 the date of commence  |   | \$   |  |         |                          |              |              |  |  |  |  |
| CLAIMS  | NUMBER  | FILED  | NUMBER EXTRA   | RATE    |                          | \$           |              |  |  |  |  |
| Total Claims  |   | 18 - 20 =  | 0  | × \$50  |                          | \$           |              |  |  |  |  |
| Independent Claims  |   | <b>2</b> - 3 =   | 0  | × \$200 |                          | \$           |              |  |  |  |  |
| MULTIPLE DEPENDE  | ENT CLAIM(S) (if app  | \$   |  |         |                          |              |              |  |  |  |  |
| :   |   | \$0  |  |         |                          |              |              |  |  |  |  |
| Applicant claims  | small entity status. S                                      |  |  |         |                          |              |              |  |  |  |  |
|   |   | \$ 400.00  |  |         |                          |              |              |  |  |  |  |
| Processing fee of \$13 claimed priority date (3   |   | \$   |  |         |                          |              |              |  |  |  |  |
|   |   | \$ 400.00  |  |         |                          |              |              |  |  |  |  |
| Fee for recording the e<br>an appropriate cover s   |   | \$   |  |         |                          |              |              |  |  |  |  |
|   |   | \$   |  |         |                          |              |              |  |  |  |  |
|   |   | Amount to be refunded:   | \$   |         |                          |              |              |  |  |  |  |
|   |   | Amount to be charged:  | \$   |         |                          |              |              |  |  |  |  |

PTO-1390 (Rev. 07-2005)

Approved for use through 3/31/2007. OMB 0651-0021
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. to cover the above fees is enclosed. b. 🛛 Please charge my Deposit Account No. 11-0160 in the amount of \$400.00 to cover the above fees. A duplicate copy of this sheet is enclosed.  $\boxtimes$ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any ¢. overpayment to Deposit Account No. 11-0160. A duplicate copy of this sheet is enclosed. d. 🔲 Fees are to be charged to a credit card. WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038. NOTE: Where an appropriate time limit under 37 CFR 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the International Application to pending status. SEND ALL CORRESPONDENCE TO: 16 JUN 06 Blackwell Sanders Peper Martin, LLP 720 Olive Street, Suite 2400 Samuel Digirolamo St. Louis, MO 63101 29,915 REGISTRATION NUMBER